METHOD AND CIRCUITRY FOR CONTROLLING SUPPLY VOLTAGE IN A DATA PROCESSING SYSTEM

ABSTRACT OF THE DISCLOSURE

Supply voltages within a data processing system may be controlled by a voltage control module which can provide digital signals to a power management unit to cause changes in supply voltages without software intervention. For example, in one embodiment, a voltage control signal and a standby signal may be provided to control the supply voltages output by a voltage regulator within the power management unit. In one embodiment having multiple processors, a voltage control signal and a standby signal corresponding to each processor may be provided to the power management unit which has a voltage regulator supplying an independently controlled supply voltage to each processor. Alternatively, a voltage regulator, a voltage control signal, and a standby signal may be shared by multiple processors, where the voltage control module may ensure that the supply voltage is changed only when the change is appropriate for all processors sharing the same voltage regulator.